This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of manufacturing a gas sensor comprising:

a. providing a housing containing a reservoir;

b. receiving an electrolyte in the reservoir;

c. impregnating a substrate of a gas porous membrane with a conductive material, so that said conductive material defines an electrical pathway between an electrical contact on a first surface of the membrane and an electrode on a second surface of the membrane; and

d. arranging the membrane to seal the reservoir,

wherein the substrate of the gas porous membrane is impregnated with the conductive material ~~by~~ via a wick.

2. (Previously Presented) A method according to claim 1 further including the step of attaching the wick to the electrode.

3. (Original) A method according to claim 2 whereby the wick is pressed or sintered to the electrode.

4. (Original) A method according to claim 3 whereby the wick is sintered to the electrode at a temperature of between 300°C and 370°C.

5. (Currently Amended) A method according to claim ~~[[1]]~~3 whereby the wick is sintered to the electrode at a temperature of between 320°C and 370°C.

6. (Cancelled)

7. (Previously Presented) A method according to claim 1 whereby the gas porous membrane is impregnated by the conductive material via the electrode.

8. (Cancelled)

9. (Cancelled)

10. (Previously Presented) A method according to claim 1 whereby gas porous membrane is impregnated by the conductive material in a melted state.

11. (Currently Amended) A method according to claim 1 whereby the electrode and the ~~external~~ electrical contact are formed on the gas porous membrane by any one of the following:

(a) screen printing;

(b) filtering in selected areas from a suspension placed onto the gas porous membrane; or

(c) spray coating.

12. (Cancelled)

13. (Cancelled)

14. (Previously Presented) A method according to claim 1 wherein the gas porous membrane and the housing are bonded together using adhesive.

15. (Previously Presented) A method according to claim 1 wherein the gas porous membrane and the housing are bonded using heat and/or pressure so that a material forming the housing melts and impregnates the gas porous membrane, thus forming a strong bond therebetween.

16. (Previously Presented) A method according to claim 1 whereby the permeability of at least one region of the gas porous membrane to gas is decreased in order to limit the amount of gas reaching the electrode.

17. (Previously Presented) A method according to claim 16 whereby the permeability of at least one region of the gas porous membrane to gas is decreased by any one or combination of the following steps:

a) compressing the region;

b) impregnating the regions with wax; or

c) impregnating the region with a polymer.

18. (Currently Amended) A gas sensor comprising:

a. an electrode formed on a gas porous membrane;

b. a housing containing a reservoir, wherein when in use, the reservoir contains a liquid electrolyte for contacting the electrode;

c. an electrical contact, configured to make an external connection from the gas sensor;

d. a conductive material disposed between the electrode and the electrical contact; and

e. a wick being arranged to contact both the liquid electrolyte and the electrode, the wick having at least one aperture formed therein through which the ~~electrolyte~~ conductive material can be introduced,

wherein at least a portion of the electrode and a portion of the gas porous membrane substantially adjacent thereto, are impregnated with the conductive material, the conductive material forming an electrical pathway through the gas porous membrane which connects at least the electrode to the electrical contact.

19. (Previously Presented) A gas sensor according to claim 18 wherein the electrode and/or the electrical contact are formed from a porous electrically conductive material containing a catalyst material.

20. (Previously Presented) A gas sensor according to claim 18 wherein the electrode is a sensing electrode for creating the desired electrochemical reaction between the electrolyte and a gas to be sensed.

21. (Previously Presented) A gas sensor according to claim 18 wherein the electrode is a counter electrode which performs an electrochemical reaction with oxygen.

22. (Original) A gas sensor according to claim 18 further including a reference electrode.

23. (Original) A gas sensor according to claim 18 further including a gas generating electrode.

24. (Currently Amended) A gas sensor according to claim 18 wherein the conductive material includes a conductive polymer ~~electrolyte~~.

25. (Previously Presented) A gas sensor according to claim 24 wherein the conductive material is a plug, pin, or other shaped component suitable for forming an electrical path between the electrode and the electrical contact.

26. (Currently Amended) A gas sensor according to claim 18 wherein the electrical contact includes ~~the~~ a conductive polymer ~~electrolyte~~.

27. (Previously Presented) A gas sensor according to claim 18 wherein the electrical contact is a metal strip attached to the gas porous membrane.

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Previously Presented) A method of forming an electrical pathway across a microporous membrane having first and second major surfaces, where the microporous membrane is impervious to liquid and permeable to gas, comprising the steps of:

a.) maintaining sufficient heat to melt a conductive material;

b.) urging the melted conductive material through pores of the microporous membrane at a first surface by establishing a pressure differential across the first and second surfaces;

c.) controlling the heat and pressure differential until the melted conductive material emerges at the second surface; and

d.) allowing the material to cool so as to form a continuous, electrically conductive pathway from the first surface to the second surface while preserving the liquid impermeability and gas permeability characteristics of the microporous membrane.